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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,738

03/28/2006

Richard M. Miller-Smith

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EXAMINER

BURD, KEVIN MICHAEL

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,738	Applicant(s) MILLER-SMITH, RICHARD M.	
	Examiner Kevin M. Burd	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claims 1-9 and 19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Regarding claims 1-9, the recited method must be tied to another statutory class or transform underlying subject matter to another state or thing. These requirements are not met by the recited process. Regarding claim 19, the claim recites a record carrier. A carrier is an electromagnetic signal and an electromagnetic signal is not statutory subject matter.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-3, 5-12 and 13-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-3, 5-9 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: the steps that

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determine the number of bits required to represent an output value as stated in the preamble of the independent claims.

Claims 10-18 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: the elements that determine the number of bits required to represent an output value as stated in the preamble of the independent claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou (US 2002/0164081) in view of Zhou et al "IDCT output range before clipping in MPEG video coding", Signal Processing, Image Communication, Elsevier Science Publishers, Amsterdam, NL, vol. 11, no. 2, December 1997, pages 137-145.

Regarding claims 1-3, 7, 8, 10-12, 16, 17 and 19, Zhou (US 2002/0164081) discloses a method shown in figure 4. DCT-based video compression such as MPEG1 or MPEG2 is decomposed into macroblocks and the macroblock comprises 8 x 8 blocks (paragraph 0004). DCT is performed on the macroblock. A sum of the coefficients is computed. The sum is compared to a threshold (paragraph 0015 and figure 4). An IDCT

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is then conducted. Zhou (US 2002/0164081) does not disclose determining the number of bits required to represent an output value. Zhou (IDCT) discloses in the DCT coding of 8-bit image material, e.g. in MPEG coding, the input of the DCT transform should have a precision of 8 bit in intra-coding and 9 bit in motion compensated predictive coding (section 1). Zhou (IDCT) also discloses in MPEG video coding, IDCT is carried out on the intra-block and the inter-block. An intra-block has its values ranged from 0 to 255, while the values of an inter-block are in the interval -255 to 255 (page 141, left column). Therefore, Zhou (IDCT) determines the number of bits required to represent the data. The combination of Zhou (US 2002/0164081) and Zhou (IDCT) discloses each of the elements claimed although not in a single prior art reference. It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the method and apparatus of Zhou (IDCT) into the method and apparatus of Zhou (US 2002/0164081) and that in combination, each element merely performs the same function done separately. The results of the combination are predictable.

Regarding claims 4 and 13, Zhou (IDCT) discloses in the DCT coding of 8-bit image material, e.g. in MPEG coding, the input of the DCT transform should have a precision of 8 bit in intra-coding and 9 bit in motion compensated predictive coding (section 1). Zhou (IDCT) also discloses in MPEG video coding, IDCT is carried out on the intra-block and the inter-block. An intra-block has its values ranged from 0 to 255, while the values of an inter-block are in the interval -255 to 255 (page 141, left column). Therefore, Zhou (IDCT) determines the number of bits required to represent the data.

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Regarding claims 5 and 14, Zhou (US 2002/0164081) discloses, as a result of the comparison, the type of reconstruction that is done in figure 4.

Regarding claims 6 and 15, Zhou (IDCT) discloses additional bit precision is used to process the IDCT (right column on page 144 and page 145).

Regarding claims 9 and 18, Zhou (IDCT) discloses the IDCT output will have a maximum value of 517 (page 144).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Burd whose telephone number is (571) 272-3008. The examiner can normally be reached on Monday - Friday 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin M. Burd/
Primary Examiner, Art Unit 2611
6/8/2010